VITA Briefing

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Joint Legislative Audit & Review Commission
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Today's topics

- **Computer outage**
- VITA - History and context
- JLARC suggested topics

Outage update

- Initial outage began Wednesday, Aug. 25
  - Preliminary cause: Hardware failure of Tier 1 data storage system at CESC
  - Hardware: EMC DMX-3
    - Industry leading, enterprise-class storage
    - 99.999 percent reliability, 1.2 billion hours without failure, first ever dual card failure

- Initial impact: 26 of 89 agencies (13 percent servers, 30 percent data)

- Significant impact to DMV, TAX, DSS, DEQ, SBE, DJJ, GOV, VITA and VITA shared services

- Initial response managed by Northrop Grumman and VITA
  - EMC, Oracle, others dispatched senior-level technical teams to CESC

- Recovery effort: Around the clock but unacceptably slow

- Other services unaffected: network infrastructure, security monitoring, mainframes, e-mail service, phones or desktops

Outage update

- Key factors:
  - Initial outage induced significant database corruptions; cascading effect on recovery time
    - Time needed to begin tape recovery was delayed
    - Time to recover from backup and rebuild databases required several days effort and re-testing by agencies

- Next steps:
  - Governor McDonnell "Independent review of information system failure and contractor response…"
    - Collaboration with legislative leaders (JLARC)
    - Paid for by Northrop Grumman
  - Lessons learned
  - Corrective action plan

![VITA logo]

Virginia Information Technologies Agency

Today's topics

- Recent outage
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VITA mission

- Uniform, consistent, business-like approach to the management of IT services

- Concept of "shared services" - statewide information *infrastructure* technology services for government entities

- Central technology procurement, standards, policies and procedures

- Security policies and standards for executive, judicial and legislative branches

- Project management oversight and approval for all major IT projects

- Enterprise applications, Wireless E-911, VGIN

State of technology: 2002

- 90+ independent, autonomous IT shops

- Independent, duplicative systems

- Millions $ in failed IT projects, no project management organization

- Aging, decades-old infrastructure

- Inadequate security; no disaster planning

- Inability to leverage buying power or manage investments

- Obstacles to sharing information across agencies

- Few metrics on performance, spend and service delivery
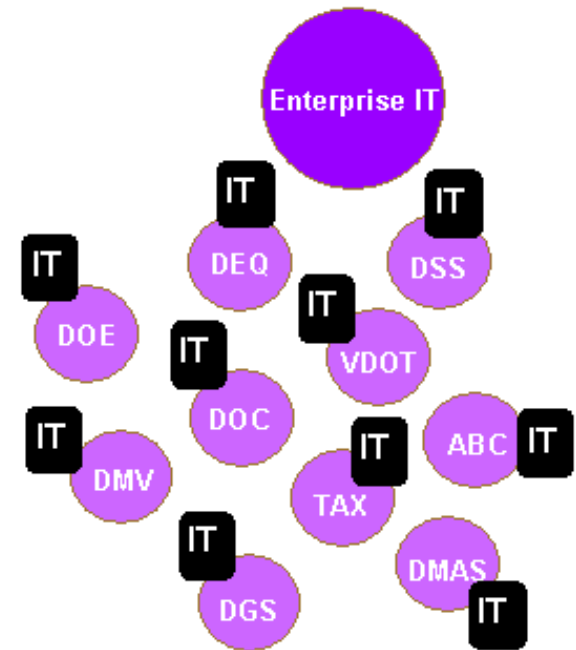
VITA – Created in 2003

- Concept based on SoTech and JLARC reports, legislative input

- Consolidation of statewide information *infrastructure* technology services for government entities

- Central technology procurement, policies and procedures

- Security policies and standards for executive, judicial and legislative branches

- Project management oversight for all major IT projects

- Significant institutional resistance to change

VITA – Revamped in 2010

- SB 236/HB 1034 enacted March 11, 2010
  - Legislation implemented multiple JLARC recommendations
- Governance changes:
  - Information Technology Investment Board eliminated
  - CIO appointed by Governor
  - Information Technology Advisory Council established as an advisory body
    - Comprised primarily of agency representatives
- IT projects
  - Definition of "major IT project"
    - Goal: complete by end of 2010
    - Requirements to include analysis of each project's risk and complexity

CoVA IT workforce

Northrop Grumman
 83 SWESC
520 VITA program

603

Executive Branch
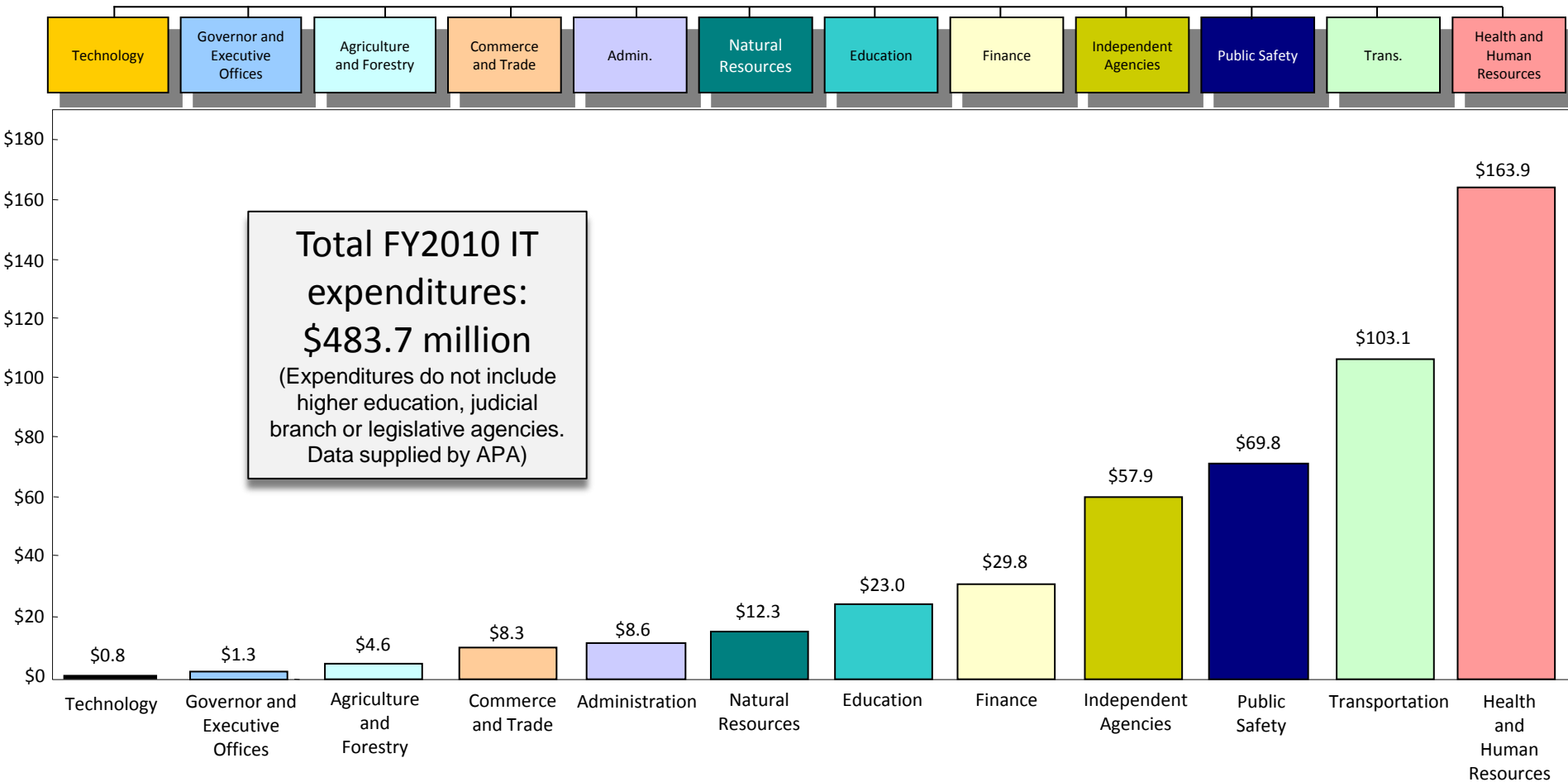(excluding higher
education's 1,500
employees)

995

283
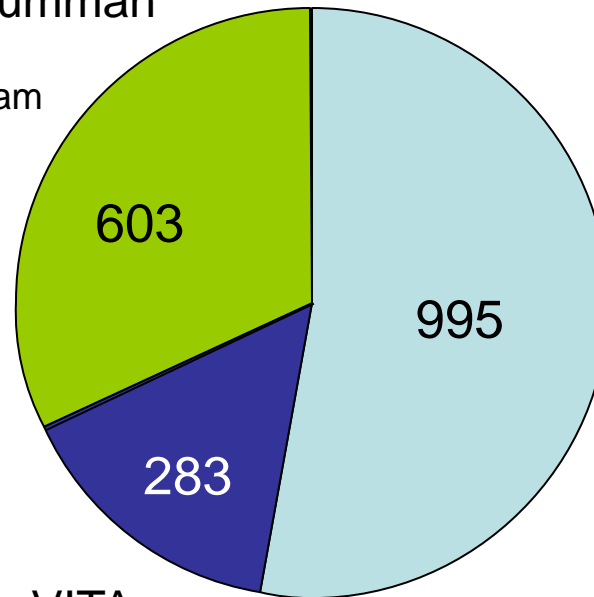
VITA
181 VITA organization
102 VITA managed

Sources: DHRM, Aug. 25, 2010
          Northrop Grumman HR
          VITA HR

IT infrastructure for executive branch

PCs and Servers

54,573 computers

3,627 servers

Disk storage

1.3 petabytes

Mainframe

4,850 MIPS

2.24 terabytes

E-mail

57,991 mailboxes

Network

64,118 ports

Printers

5,911 network printers

Communications

~55,000 desk phones

~3,600 handhelds (PDAs)

~11,000 wireless devices (cell phones)

Source: IT Asset Inventory, Spring 2010

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IT Infrastructure Program

- Established one of nation's largest state government public-private infrastructure contracts
  - November 2005 with Northrop Grumman Corporation
  - Valued at $3.2 billion over 13 years
  - $270 million up-front capital investment, job creation and modernization initiatives
  - Virginia obtains agile 21st century infrastructure for what it was paying to maintain decades-old infrastructure

Northrop Grumman capital investment

"Jump-Starting" Infrastructure Investments Through Private Partners

Messaging Services

Enterprise Exchange/Outlook E-mail
Enterprise Collaboration Tools
Active Directory, DNS
$25M Investment

Desktop

Mass Desktop Refresh
Network Printer Consolidation and Refresh
Enterprise Desktop Management Systems
$35M Investment

Help Desk

Enterprise Help Desk in Russell and Chesterfield
Field Based Agents and Technicians for Level 3
Enterprise Help Desk System (Peregrine)
$10M Investment

Mainframe and Servers

New IBM and Unisys Mainframes
Consolidation and Refresh of Servers
Migration of servers to the Data Center
$50M Investment

Transformation

People – Process – Tools
Reliable, High-Performance,
Enterprise-Wide IT Infrastructure
$270 Million Investment

Security

Enterprise Security Operations Center
Computer Security Incident Response Center
Secure Internet Gateway
$10M Investment

Tier 3 and Tier 2 Facilities

New Data Center/Office Building in Chesterfield
New Disaster Recovery Center and Help Desk
in Lebanon, Russell County
$60M Investment

Network

New Commonwealth-Wide MPLS Core WAN
LAN upgrades to Local Switches/Routers as Needed
Network Re-addressing of IP, DHCP
$60M Investment

Voice / Video

Voice-Over IP Network Optimized for
Voice and Video Traffic
$20M Investment

Transformation – What is it?

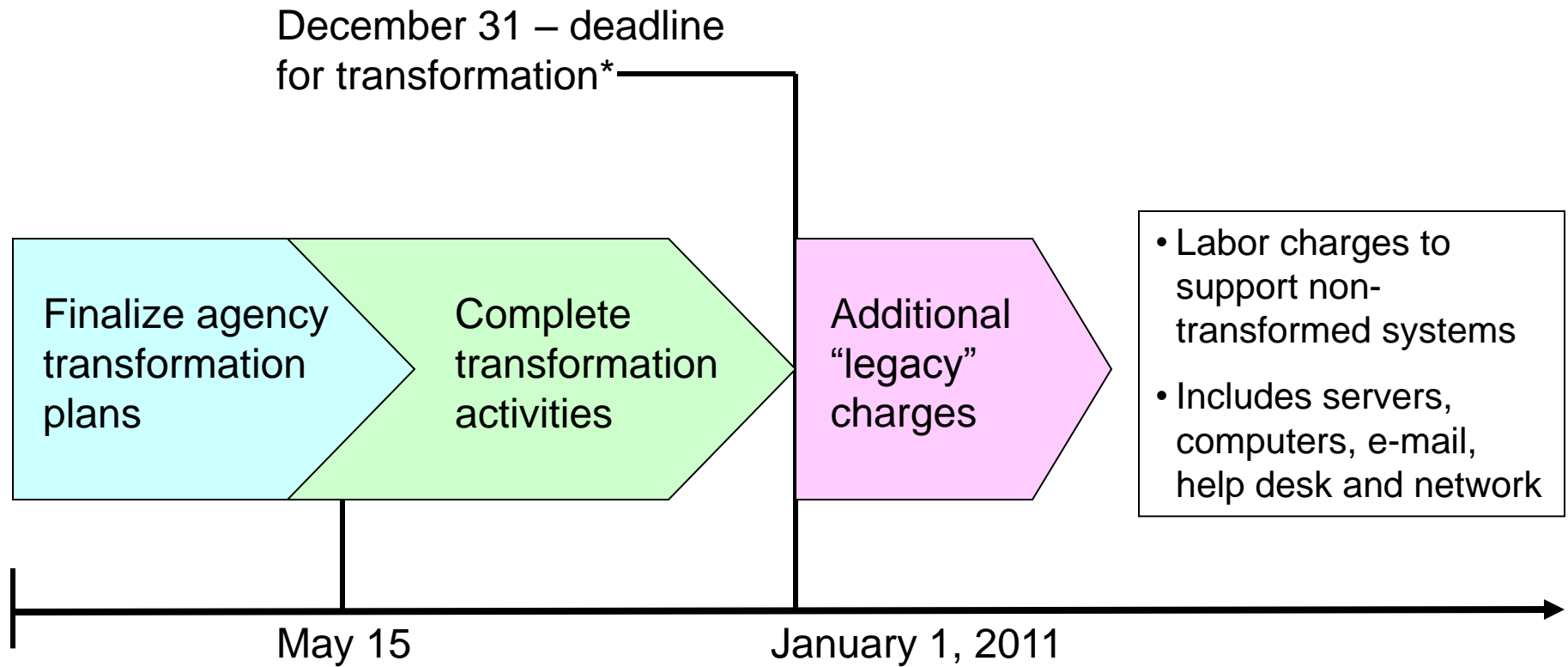- Centralized monitoring, management and support of infrastructure for executive branch agencies

- Includes several 'towers'
  - Desktop computers, e-mail, help desk, storage, network, servers as a packaged service
  - Regional support model
  - Hardware refresh
  - Security and network monitoring
    - 24 x 7 x 365
  - Standard IT support processes
  - Standard toolsets installed on computers/servers

Transformation - Contractual deadlines

December 31 – deadline for transformation*

Finalize agency transformation plans

Complete transformation activities

Additional "legacy" charges

- Labor charges to support non-transformed systems
- Includes servers, computers, e-mail, help desk and network

May 15

January 1, 2011

* Transformation activities for DMAS, VSP, VDEM, DFS and VEC to be completed as soon as practicable

Transformation – Big picture

Overall status as of Aug. 30, 2010	
Total	89
Complete	61
Remaining	28
Scheduled signed	18
Scheduled, not signed est. CY2011	9
Scheduled, not signed est. CY2010	1

Transformation – Agency status

Month Complete - >	Aug	Sept	Oct	Nov	Dec	2011	Signoff	Est. Legacy rate
VDACS		Sept					Y	
BOA		Sept					Y	
DMME		Sept					Y	
DCJS		Sept					Y	
DHR		Sept					Y	
DOC		Sept					Y	
DMV		Sept					Y	
DOAV		Sept					Y	$ 2,023
TD			Oct				Y	
DGS			Oct				Y	
DMAS			Oct				in progress	
DHP			Oct				Y	
VDH				Nov			Y	$ 597
MVDB				TBD			Y	$ 195
VITA				Nov			Y	
DHRM					Dec		Y	
TAX					Dec		Y	$ 94,155
DFP						Jan	Y	$ 6,080
VDOT						Feb	Y	$ 36,380
DFS						TBD	in progress	TBD
DRS						TBD	in progress	$ 4,774
VDDHH						TBD	in progress	
VRCBVI						TBD	in progress	
VBPD						TBD	in progress	
DBVI						TBD	in progress	
VEC						TBD	escalated	$ 44,800
VDEM						TBD	in progress	$ 29,651
VSP						TBD	in progress	$ 64,686
Totals	0	8	4	3	2	11		

5 Agencies are part of DRS (DRS, VDDHH, VRCBVI, VBPD, DBVI)

Contract revisions – March 2010

The revisions set the tone for a more productive working relationship.

Performance improvements

- Expedites service and response
- Provides agencies greater flexibility over administrative tasks
- Improves speed and quality of procurement and service requests
- Overhauls help desk services
- Adds new services and pricing options
- Moves desktop upgrades forward

Accountability and operational efficiencies

- Consolidates and strengthens service level agreements (SLAs)
  - SLAs available online
- Increases SLA penalties by 15 percent
- Creates a clear, faster dispute resolution process
- Establishes three-month review period to ensure performance

Financial

- Extends contract three years
- Allows billing from a re-baselined inventory
- Provides for more detailed billing

New services, more choices and stronger metrics

- Provides needed services to meet business needs
  - Wireless
  - Data encryption
  - Managed firewall
  - Enterprise Virtual Private Network (VPN)
  - Voice over Internet Protocol (VoIP) telephony

- Provides <u>tiered</u> solution options with different price points to meet budget and business needs
  - Storage
  - Servers
  - Printers
  - Copiers
  - Disaster recovery (DR)

- Storage cost is a concern for many agencies
  - VITA is working to mitigate impact

Amendments, initiatives are working

- Immediate improvements
  - Better working relationship between VITA and Northrop Grumman
  - Cleared many escalated issues
    - Defined process
    - No dead ends
  - Rapid response team (RRT) in place, responding to major outages
  - Key performance metrics established

Virginia Information Technologies Agency

Improving customer service - Operational improvement initiatives, memorialized 6/28

#	Initiative	Objective
1	Rapid Response Team	Resolve on-site incidents faster
2	Agency tech lead empowerment	Provide agencies flexibility to handle routine changes
3	Laptop/desktop depot service	Fix hardware issues quickly with spare equipment and parts
4	Expedited shipping option for desktop/laptop replacement	Provide quicker resolution of hardware issues and return employees to work condition in a more efficient manner
5	Improve work request process and technology architecture/solutioning redesign	Make the process faster and more effective for customers
6	Inventory/billing disputes	Resolve billing and inventory disputes faster and effectively
7	Help desk redesign	Improve overall help desk service and support
8	Inventory errors operational improvement initiative	Reduce agency inventory inaccuracies and billing disputes
9	Work request and procurement processing times	Establish processing times for the work request and technology architecture/solutioning redesign processes
10	Storage management	Provide information necessary to reduce storage resource unit consumption

Contract events

- Contract and related activity - complete
  - Plan developed for enhanced ordering processes (agency work requests)
  - List of proposed operational improvements exchanged on Aug. 16
  - Agency, cabinet and legislative staff briefings
- Contract activity - upcoming
  - In October, CoVA has right to request Northrop Grumman to implement current best practices and best technology
    - Section 14.4 of the Comprehensive Infrastructure Agreement
    - Process available to CoVA October 2010 and annually thereafter
    - If good faith negotiations fail, CoVA has certain termination rights
  - Complete transformation by Dec. 31

Program with Northrop Grumman

- Status of benchmarking efforts
  - High-level preliminary analysis
    - CoVA total IT spend
      - SoTech, VITA
      - Inputs from Gartner, NASCIO, APA
  - Pending activities
    - Scheduled January 2012 (Amendment 60)
    - Next Steps
      - Determine comparables
      - Establish process
      - Identify vendors

Rates for IT services

- Approved July 12

- Most significant revision of Commonwealth IT rates ever undertaken at one time

  - Replaces previous rate structure

- Adjusts for re-baselining and revised contract with Northrop Grumman

Rates for IT services

The new rates include:

- Vendor costs

  - Direct, usage-based costs

  - Share of indirect (usually fixed) costs

    - Includes current year cost of living adjustment (COLA) (est.)

- VITA services

  - Reflects a 15 percent reduction in VITA's retained organization expenses

VITA cost recovery vs. overhead

Estimated FY 2011 Commonwealth IT Costs

2%
8%
90%
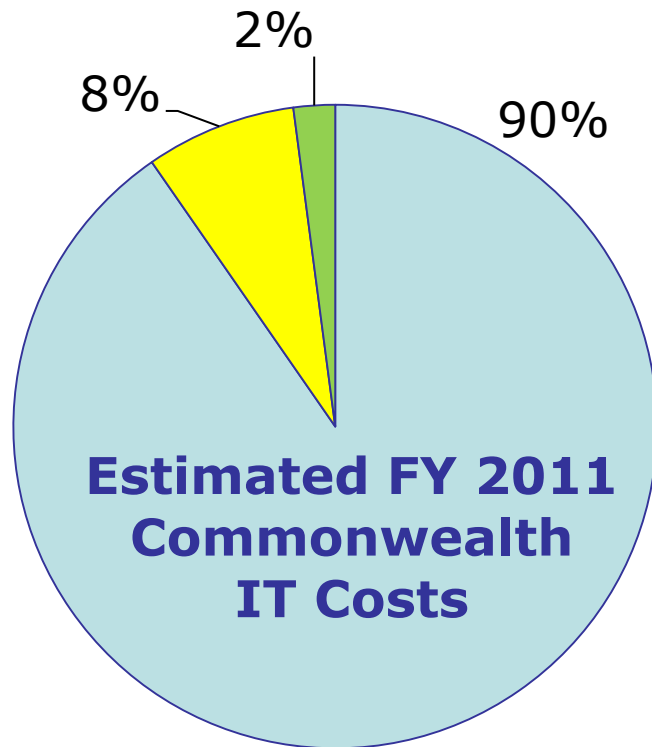
☐ Vendor Expenses (per unit & fixed fees)

☐ VITA Services

☐ VITA Debt Recovery (Annual share)

![VITA logo] *Virginia Information Technologies Agency*

Rate example

Bundled *service*: Laptop computers

Laptop Rate: Service Components	Vendor Per Unit Charge	Allocation of Vendor Fixed Fees	VITA Services	VITA Debt Recovery (Short Term)	Total
Hardware & Software	$35.75	$18.27	$4.67	$1.25	$59.94
E-mail - Messaging	$10.38	$2.86	$1.15	$0.30	$14.69
Technical Support	$21.14	$5.83	$2.33	$0.62	$29.92
Help Desk	$9.48	$2.62	$1.05	$0.28	$13.43
Total Laptop	**$76.75**	**$29.58**	**$9.20**	**$2.45**	**$117.98**
% of Total	*65.1%*	*25.0%*	*7.8%*	*2.1%*	*100.0%*
	Vendor 90.1%		*VITA 9.9%*		

Legacy rates

- Effective January 2011 for agencies that have not completed transformation

    - Server support
    - PC support (desktop, laptop, tablet)
    - Mailbox
    - Help Desk – per PC
    - Help Desk – per server
    - Wide area network (WAN)
    - Local area network (LAN)

VITA – Opportunities for Improvement

- VITA organization
- Contract labor spend management
- Initiatives to improve agency productivity, manage IT consumption, reduce costs
  - Enterprise electronic content management
  - Operational efficiency improvement
  - VoIP initiative
  - Storage management initiative
  - Enterprise procurements

Questions

- Questions?

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Resources:

www.vita.virginia.gov

- Contract amendments

- Operational improvement initiatives work plan